



Centerline

An Environmental News Quarterly, From the NC DOT Natural Systems Unit

Adding the Division Environmental Officer Program Equals Positive Results

By: V. C. Bruton, Ph.D.

Manager, Office of Natural Environment

In recent years the North Carolina Department of Transportation (NCDOT) has been in the midst of an environmental revolution.

Although the revolution has been taking place all around us, it has not been until recently that the Department has begun to *fully* participate in the phenomenon. No longer is there an attempt to design and build transportation facilities without fully engaging the state and federal environmental community in its decisions. The Department has finally assumed its rightful role as an environmental steward.



In order to effectively project itself as an environmental partner, it has been necessary to address deficiencies in the structure and organization of various programs. One of the glaring shortcomings that was identified by management was the absence of a program that would meet the environmental and regulatory community on its own turf.

Virtually all of the environmental and regulatory agencies have established field offices throughout the state. Staff from these field offices constantly engage in the review and the critique of transportation project. NCDOT has responded by

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NCDOT Develops Juniper Bay Mitigation Site

By: Jim Hauser

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This year the North Carolina Department of Transportation (NCDOT), Natural Systems Unit initiated the development of a large wetland mitigation project in Robeson County, North Carolina, near the city of Lumberton. This project, referred to as Juniper Bay, will be used to provide compensatory wetland mitigation in the Lumber River Basin of southeastern North Carolina, to offset wetland impacts resulting from road construction projects in this basin.

The Juniper Bay site is comprised of approximately 700 acres of extensively drained agricultural fields, which are located within a historic Carolina bay. The goal of the Juniper Bay mitigation project is to restore the site hydrologically and vegetatively to the greatest extent possible, thereby recreating the functions and values provided by the wetland system. Carolina bays are geologic formations, which consist of elliptical topographic depressions oriented along a northwest to southeast axis. Most Carolina bays support hydric soils and would be classified as jurisdictional wetlands under natural conditions. However, they vary significantly in the degree of site wetness, which may occur, from marginally wet pine flats, to dense pocosin shrublands, to actual open water lakes.



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creating a Division Environmental Officer Program for each of its 14 Divisions. For obvious reasons, the Department determined that providing key environmental staff in the field would go a long way toward forging appropriate relationships with these agencies. Equally important was the fact that we had failed to provide adequate environmental support to our key operation centers around the state. The 14 Highway Divisions are the geographic operational centers, where the actual construction and maintenance activities take place. Yet with one exception, we had failed to appreciate how valuable environmental expertise would be to these operational centers on a day to day basis.

A four-year experiment in Division One (Northeast North Carolina) had proven that proper positioning of a key environmental leader could accomplish the important liaison, technical guidance and environmental outreach that was needed to help the Department affirm its intentions to be environmentally accountable. The importance of this program was vital to the overall organizational plan.

The positive benefits to the NCDOT from this program was, and continues to be, a larger, more responsible environmental role with less

delays in obtaining environmental permits, less rancor in negotiating acceptable objectives, and more cooperation among the resource agencies due to the pro-active outreach approach. The achievement of success in this area not only promotes harmony among agencies with diverse agendas, but tens of millions of dollars could possibly be saved due to keeping projects on schedule.

This new field Division Environmental Officer Program is still in the infant stages of development but all reactions thus far signal a shift in the NCDOT responsiveness to environmental concerns throughout the state. In the Department's effort to be a leader in environmental stewardship, this new program will surely be at the forefront of this goal.

In future quarterly publications, we will feature an article pertinent to NCDOT environmental studies from one of the fourteen Divisions and/or important issues or happenings for selected Divisions.

**Joint NCDOT and DEHNR Retreat
By: Hal Bain
Natural Systems Unit Head**

The North Carolina Department of Transportation (NCDOT) has for the last several years strived to increase cooperation and improve working relationships with the various natural resource agencies involved in planning, designing and building public transportation facilities. The environmental and regulatory issues are so dynamic that the NCDOT and regulatory agencies must work together as a team to resolve problems.

The NCDOT and the North Carolina Department of Environment and Natural Resources (NCDENR) initiated opportunities for staff to meet together in non-project specific retreats. These retreats allow staff from each agency to spend time with and get to know one another. Benefits from these meetings include an

enhanced understanding of how each resource agency works and what each agency needs from the other to perform their respective jobs.

Participants joined in exercises on the first day, designed to foster a sense of trust and teamwork. The second day's activities included sessions on improving communication skills with a focus on listening and understanding.

In the final analysis, the ability to communicate effectively, between agencies, as well as within agencies, may be the single most important factor contributing to successful interagency working relationships. As a result of the positive response by retreat participants, NCDOT anticipates coordinating with additional state and federal agencies to schedule future team building training sessions.

Roads as Bridges and Barriers **An NCDOT/CTE Research Initiative** **By Christopher P. Brooks**

Mr. Brooks is a Ph.D. student at UNC-Chapel Hill. He has a M.S. degree in Biology from Murray State University and a B.S. from Kennesaw State University. Christopher is a co-author of the research grant and the project encompasses part of his Ph.D. dissertation research.

Conservation and environmental restoration efforts are sometimes seen as being opposed to development and economic growth. The scientific community must team with public and private interests to examine the impact development has on natural systems and work to minimize it.

The North Carolina Department of Transportation and the Center for Transportation Education (NCDOT/CTE) have initiated a research project, "Assessment and Prediction of the Effects of Highways on Population Ecological and Genetic Properties of Selected Faunal Groups" to examine how roadways may fragment habitats and increase extinction risk for subsequently isolated populations.

The focus of this research is to examine the nature of this fragmentation and how to reduce the impacts of new roads. The research is based on the idea that different organisms complete their life cycles in a diversity of ways. Even among closely related species some have more offspring than others do; some are large, some small; some guard their young for long periods, some do not. Animals in fragmented landscapes also frequently show a loss of genetic diversity due to restriction of their movement (or flow of genes between fragments of the population). These differences impact the ways in which individuals of a given species interact with their surroundings, or habitat. By examining which of these characters might predict the level of isolation, both ecological and genetic, when a barrier (i.e., a road) separates habitat patches we hope to predict which species might be vulnerable to proposed road projects prior to road construction.

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Environmental Functions of **Starmount Forest Country Club's Creeks** **By Michael Brown, CGCS**



Have you done anything positive for the environment this year? If you're a member of Starmount Forest Country Club in Greensboro, North Carolina, the answer is yes! The creek lines that run through our golf course are making a positive impact on wildlife and flora in an urban setting.

Rare is the opportunity to make such forward steps to reclaim wildlife and flora to urban settings. Our partnership with NCDOT has been wonderful for environmental issues, however, such positive impact for wildlife does not always agree with our golf game... Gone are the days when we used to weed-eat our creek line to a mower's height of cut. This practice would encourage erosion, but we could usually find errant golf shots. With the NCDOT maintenance guidelines for the creeks in place, the creeks now play as both a water and vegetative hazard.

Starting at the top of the creek lines to a distance of 10 feet from the crest, a minimum 8-inch cut is required. This 8-inch cut acts as a filtration system to aid in preventing nitrates from

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These possible “isolation effects” are not just related to the organisms, they are also dependent on road characteristics. For example, the number of lanes, access control, median barriers, traffic density, presence or absence of a median, presence or absence of culverts or drainpipes, etc. might alter the level of ecological and genetic isolation. By combining the information based on the species’ life histories, their genetic diversity and the road characteristics we plan to create a model that could predict which species, known to exist in a given area, might be impacted the most by a proposed road construction project.

Such information has not traditionally been a part of the highway planning process. Ecological planning has traditionally included examination of pre-existing populations of endangered or threatened species or restoration of wetlands through federal mandates. NCDOT/CTE’s efforts to establish links with the scientific community which could result in preventative policies instead of policies that require reaction to existing problems is indicative of the change in focus from opposition to co-operation.

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entering the waterway and leaving the property. This buffer also acts as a defining border for chemical free zones around the creeks, preventing water pollution and toxic free vegetative areas for wildlife. From a golfer’s perspective, the crossing and lateral hazards are widened, creating a more challenging golf hole.

From the top of the crest down to the water channel, minimum 18-inch flora is required. The taller heights in these areas act as wildlife habitat. In addition to acting as a secondary filtration system, the roots of these plants help prevent erosion on the creek banks. Bird, rodent, reptile, and insect habitation are increased in an urban setting as a result of this project, helping keep our ecosystem in check. From a golfer’s perspective, errant golf shots are almost impossible to find.

Our contribution to this community in the form of better ecological responsibility will have a positive impact environmentally for many generations. This will be one of the legacies left behind by the turn of the century Starmount Forest Country Club membership. When you stop to think about it, it’s well worth the hazards that are more penalizing than before...

**Natural Systems Consultant Contract
Selections for 2000-2002
By: Phil Harris, P.E.**

On June 14, 2000, the Natural Systems Unit selected the 2000-2002 “on-call” consultant contracts. There were a total of twenty private consultant firms that submitted proposals. Ten firms were selected to assist the Natural Systems Unit and will be responsible for handling natural resource investigations, wetland and stream mitigation planning and design activities, and preparation of permit applications. Of the ten firms selected, seven were repeat consultants from the previous two-year contract. The total amount for the ten “on-call” contracts equals \$7.4 million. In the adjacent list are the consultants selected to perform natural systems work for 2000-2002:

ARCADIS Geraghty & Miller

Environmental Services, Inc.

Buck Engineering

Hayes, Seay, Mattern & Mattern, Inc.

DSAtlantic Corporation

HDR Engineering, Inc. of the Carolinas

EarthTech, Inc.

LandMark Design Group

ECOScience Corporation

Rummel, Klepper & Kahl

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The NCDOT has completed much of the preliminary studies of the existing site conditions. Topographic mapping of Juniper Bay has been completed. The groundwater monitoring gauges have been installed throughout the site and data has been collected for approximately 10 months. Soil boundaries on the site have been identified and mapped. Hydrologic studies will be initiated utilizing the DRAINMOD model which will show the effect of the existing ditch network on groundwater levels across the bay and help predict the resulting groundwater level once ditches are blocked.

To help in identifying the appropriate restoration objectives, the NCDOT has identified a Carolina bay reference system in the nearby Bladen Lakes State Forest in Bladen County, North Carolina. The Tatum Millpond Bay was selected as the reference site, which comprises approximately 1500 acres. This bay was chosen based on its similarity in size and soil types, and its protected status as a North Carolina Natural Heritage Area. Tatum Millpond Bay is presently being studied to establish the appropriate hydrologic and vegetative goals for the restoration of Juniper Bay.

The NCDOT has also established a research contract with the Soil Science Department at North Carolina State University (NCSU) to investigate the long term hydrologic, soil, and vegetative changes that occur in Juniper Bay as a result of the restoration efforts. This research project will provide a unique opportunity to study the before and after effects of wetland restoration work on a large Coastal Plain system with significant hydrologic control. In addition to evaluating the evolution of the site's physical characteristics, NCSU will be testing new assessment technologies to evaluate their usefulness to mitigation planning. Included in these studies will be ground penetrating radar (GPR) and passive aerial microwave radiometry. NCSU will further investigate the suitability of reference systems as tools in mitigation planning.

The NCDOT has invested significant time and resources into the Juniper Bay mitigation project, and further studies are proposed for the

upcoming year. The NCDOT's support of the Juniper Bay project demonstrates our commitment to maintaining environmental quality while providing a modern transportation system.

North Carolina Staff Visits Pennsylvania DOT Interagency Meeting

By: V. C. Bruton, Ph.D.

Manager, Office of Natural Environment

On October 25, 2000, several staff members from the North Carolina Department of Transportation (NCDOT) and the North Carolina Department of Environment and Natural Resources (NCDENR) attended PENN DOT's interagency meeting in Harrisburg, Pennsylvania. The purpose of the visit was to compare the similarities/differences of how the two states conduct their interagency meetings.

Pennsylvania's meeting format is similar to North Carolina's except they set aside five days each month for their meeting (two days for field review and three days inside). Agency representation is also similar, with 35 individuals and eight agencies including the Environmental Protection Agency, Fish and Wildlife Service, the U.S. Army Corps of Engineers, the State Agriculture Department, and staff from various Metropolitan Planning Organizations (MPO).

The PENN DOT meeting focused on the new environmental regulations and general procedural issues. However, the majority of the meeting time was project related. PENN DOT relies heavily on consultants (85%) for project related studies. Their "Maintenance First" program means that a significant portion of the highway program is directed toward reconstruction of existing systems, with very few new location projects. The two states have a comparable road program annual expenditure: Pennsylvania's is \$1.3 billion for the year, whereas North Carolina's total \$1.1 billion.

NCDOT would like to thank our hosts Susan McDonald and Ed Yewdall of Pennsylvania DOT for their hospitality and opportunity to attend the interagency meeting.

Submersed Aquatic Vegetation
By: Bruce O. Ellis, CLM, PWS
Natural Systems Unit Head

Submersed aquatic vegetation (SAV) is a unique assemblage of marine vascular plants that receive federal and state protection under the no net loss policy for wetlands (NOAA 1998). The classic example of SAV would be the seagrass beds located westward of the North Carolina Outer Banks and barrier islands.

The importance of seagrass beds is as diverse as the community. This community is one of the most productive ecosystems in the world. The seagrass beds provide structure and habitat diversity in an otherwise barren seascape, serving as an important nursery area for commercial fish and shellfish species. The SAV's also provide physical stabilization of the shoals through extensive root mats and through baffling erosive waves and currents. In addition, the seagrass beds are beneficial for the removal of excess nutrients.

There are three major species of SAV in North Carolina that occur in saline environments: shoal grass (*Halodule wrightii*), widgeon grass (*Ruppia maritima*), and eel grass (*Zostera marina*). The most common species that occur in fresh and brackish water include: southern naiad (*Najas guadalupensis*), tape grass (*Vallisneria spiralis*), horned pondweed (*Zannichellia palustris*) and sago pondweed (*Potamogeton pectinatus*).

The North Carolina Department of Transportation (NCDOT) has been required to address SAV on three major projects: the Chowan River Bridge on US 17, the Neuse and Trent River Bridges in New Bern and for the proposed NC 12 Bridge from Avon to Buxton on the Outer Banks. The proposed Avon to Buxton Bridge has the potential to impact classic seagrass beds, while the Chowan River, Neuse River and Trent River Bridges are associated with fresh and brackish water species of SAV.

The general protocols for assessing the impact on SAV include a pre-construction survey of the site and a subsequent post construction survey. Sampling is usually accomplished by SCUBA. However, mapping and sampling SAV in open water environments can be extremely

challenging. The proposed NC 12 Avon to Buxton Bridge will span approximately four miles of open water. In an effort to identify SAV beds for this project, mapping methodologies have been developed. After mapping is complete the beds will be field verified.

SAV sampling during the construction phase of a project, as well as unforeseen environmental conditions can present added levels of difficulty. For example, SAV sampling for the Neuse and Trent River Bridges in New Bern was required during the construction phase. Two major hurricanes and a very busy construction site made conditions too dangerous for divers to safely enter the water. Degraded water quality required the divers to wear dry suits and undergo disinfecting procedures in performance of their task. The dangerous water quality protocols doubled sampling time.



Since SAV beds receive protection under the no net loss policy for wetlands, it is necessary to follow the step down process for wetland mitigation. Compensatory mitigation poses a unique situation. When compared to traditional wetland mitigation SAV mitigation is much more limited in opportunity. NCDOT anticipates mitigation for SAV will require intense interagency coordination and cooperation to provide suitable compensatory mitigation for unavoidable impacts.

We cannot leave this subject without saying that not all SAV's are necessarily a good thing. Aggressive exotic species of aquatic vegetation like hydrilla (*Hydrilla verticillata*), alligatorweed (*Alternanthera philoxeroides*) and giant salvinia (*Salvinia molesta*) must receive control. Native submersed species can also achieve nuisance densities under suitable conditions and can actually become detrimental to the health of an aquatic system. The bottom line is that when environmental analyses are conducted for highway projects we must keep all issues in perspective.

Project Spotlight
US 64 from Plymouth to Columbia in Washington and Tyrrell Counties
By: Lindsay Riddick
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In 1992 the North Carolina Department of Transportation (NCDOT) initiated planning and environmental studies to improve the existing two-lane US 64 corridor between Plymouth and Columbia in Washington and Tyrrell counties. The purpose of the project is to increase safety, improve hurricane evacuation routes from the Outer Banks, and relieve traffic congestion. The new highway will be designed as a controlled access freeway from just east of Plymouth to east of Columbia on new location. The total project length is 28.7 miles.

Permit authorization from the U. S. Army Corps of Engineers, the U. S. Coast Guard, the North Carolina Division of Water Quality and Division of Coastal Management will be required. This is the first large-scale project to be processed entirely through the Section 404/NEPA merger process. This process is intended to take the project through a series of concurrence points, including purpose and need and avoidance and



minimization, to a timely decision on permit issuance. At the same time, it is intended to mesh all facets of the planning process to ensure all natural and cultural resources are addressed. This coordination process also allows NCDOT to make numerous commitments to ensure an environmentally friendly project and accelerate the project let schedule.

The two most extraordinary environmental commitments for this project, in addition to the standard avoidance and minimization efforts, are

the bridging of high quality wetland systems, where feasible, and the commitment to provide wildlife crossings along the route.

In an effort to avoid and minimize impacts to jurisdictional wetlands alignments were shifted and median widths and ditching in wetlands were reduced. We will also construct dual 640 foot long bridges over high quality wetlands associated with Kendrick's Creek in Washington County. Additional plans include construction of dual 550 foot long bridges over a high quality bottomland hardwood swamp system in Tyrrell County. These bridges are the main reason only 7.2 acres out of 86 acres of wetland impacts are to high quality systems.

To address vehicular collisions with wildlife, NCDOT will provide wildlife crossings in the form of highway underpasses. Through coordination with the North Carolina Wildlife Resources Commission three underpasses will be designed and constructed at an estimated cost of \$1,000,000 each. The NCDOT will also provide \$55,769 for research to determine the locations and habits of red wolves (*Canis rufus*) in the project area. Another \$60,000 has been allocated for a study to determine the appropriate locations for the wildlife underpasses. The third study includes \$483,462 for long term research to determine the effects of new highway construction on black bear (*Ursus americanus*) populations in northeastern North Carolina. This extraordinary effort demonstrates NCDOT's moral and financial commitment to provide first rate transportation facilities in an environmentally friendly manner. This project presented many challenges and has brought about significant new commitments on behalf of the environment. As one of the first projects to integrate Section 404 and the NEPA process, this project will serve as a model for interagency coordination on future transportation projects.

Division Environmental Training

Workshops

By: Phil Harris, P.E.

On September 11, 2000, the Natural Systems Unit began environmental training in each of the fourteen NCDOT Divisions. The Natural Systems Unit wanted to share their environmental expertise with the division personnel that construct and maintain highway projects and stream and wetland mitigation projects. Topics covered in the workshops include division involvement in environmental issues, Natural Systems interaction with the divisions, the permitting process, endangered species and wildlife issues, streams, wetlands and buffers, and a discussion on environmental commitments as outlined on the Green Sheets. The primary message of this presentation is to alert the audience of the availability of the Division Environmental Officers (DEO's) located in each division. The need for open communication between the Natural Systems Unit and the Divisions was emphasized and that environmental support is available.

Each workshop session consisted of seven topics, which were introduced by the Area Regional Coordinator and presented by various members of the Natural Systems staff. Division personnel present at these workshops included Division Engineers, Maintenance Engineers, Construction Engineers, and Resident Engineers. A second workshop in each division is currently scheduled to provide this information to the division field staff, such as bulldozer operators and survey and maintenance crews.

Each attendee received a Division Environmental Handbook and a florescent green drink "huggy" provided by the Institute of Transportation Research and Education (ITRE). For those engineers in the group, PDH credit hours were also earned.

Feedback about the environmental division workshops has been very positive. There are also discussions about creating an incentive program within the divisions for their employees to be awarded by becoming more environmentally aware.

"We Did it Again!!!!"

NCDOT Construction LET Surpasses the \$1 Billion Mark for the 2nd Consecutive

Year

By: Phil Harris, P.E.

For the second year in a row and the second time in the North Carolina Department of Transportation's history, the \$1 billion mark in construction lettings was surpassed. Included among other projects in this year's letting was the Wilmington Bypass, US 117 in Wilson and Wayne Counties, US 64 in Washington County, and I-85 widening in Durham and Rowan Counties. Much of this success was attributed to the aggressive transportation program and the close coordination with federal and state regulatory agencies in processing permit applications and negotiating mitigation for unavoidable impacts. The December 2000 letting is projected at \$284 million and will be the largest in NCDOT history.

Listed below are the monthly tabulations (in millions) of the 2000 Contract Construction Lettings:

January	\$ 59.8
February	\$109.5
March	\$ 41.9
April	\$ 48.3
May	\$ 97.1
June	\$ 36.6
July	\$ 35.3
August	\$ 54.3
September	\$ 77.1
October	\$104.1
November	\$156.0
December	<u>\$284.0</u>
TOTAL:	\$1.104 Billion

Invited Article
Historic Bridge Relocation and Reuse Program

By: Mary Pope Furr
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Hundreds of metal truss bridges once spanned North Carolina's streams and rivers. As the successor to the covered wooden truss bridge, the metal truss variety was the most common type of bridge built during the late-nineteenth and early-twentieth centuries. No matter the size they offered safe and speedy passage to travelers, who had previously relied on fords and ferries. Today's heavier loads and wider vehicles demand new bridges of concrete and steel, yet the old metal truss bridges often remain structurally sound. The North Carolina Department of Transportation (NCDOT) has successfully developed programs to save these bridges so that they can continue to be utilized and admired.

In 1979, NCDOT established a program for the relocation and reuse of the state's remaining metal truss bridges. The program began with the completion of a statewide study of existing metal truss bridges, sponsored by NCDOT and the North Carolina Department of Cultural Resources (NCDRC). The results of this study were published in *North Carolina's Metal Truss Bridges: An Inventory and Evaluation*. Upon completion of the study, thirty-five of the 259 metal truss bridges studied were determined eligible for the National Register of Historic Places. These bridges were considered to be the best representatives of the diverse and once widespread system of metal truss bridges in North Carolina. Almost immediately NCDOT developed strategies and alternatives to aid in the preservation of these historic structures, either on their existing sites or in new locations. Among these strategies are donation of bridges with protective covenants to new owners, assistance with disassembly and relocation, storage in a bridge yard until a new owner can be identified, and preservation of the structure on its existing location. To date NCDOT has successfully donated six of the metal truss bridges determined eligible for the National

Register to new owners. No metal truss bridge determined eligible in 1979 has been demolished.

In 1995, NCDOT and the NCDRC undertook a re-evaluation of the metal truss bridges. Since 1979, the number of state-owned metal truss bridges had been reduced from 259 to 122. Some of the bridges had been taken off of the state highway system and preserved in place, others had been relocated and given to new owners, and many that were not eligible for the National Register in 1979 had been demolished. In the 1995 survey, twenty-two bridges were added to the list of metal truss structures that were eligible for the National Register. Again, NCDOT's Bridge Relocation and Reuse Program offered alternatives to demolition of the historically significant bridges scheduled for replacement. However, this time the program expanded to include bridges determined not eligible for the National Register as candidates for re-use if they were structurally sound enough to withstand the relocation.

While it continues to be necessary to replace metal truss bridges which have become functionally obsolete and cannot be maintained to meet current design standards and vehicle loads, NCDOT has actively sought alternatives to demolition of the state's historic metal truss bridges. While many of these bridges are no longer sufficient for highway use, these metal veterans may continue to serve pedestrian, bicycle, and restricted vehicular traffic off of the state highway system. The success of this program has prompted NCDOT to undertake a statewide inventory of all bridges forty years of age or older and determine if they are eligible for the National Register. NCDOT is also considering proposals to save some of the remaining concrete arch bridges so that the public may continue to admire their beauty and engineering as well as that of the

Department of the Army Commander's Award
for

**Public Service Presented to William D.
Gilmore**

**By: V. C. Bruton, Ph.D.
Manager, Office of Natural Environment**

William D. Gilmore, Branch Manager, Project Development and Environmental Analysis Branch (PD&EA), was presented the Commander's award for Public Service by Colonel James W. Delony on November 6, 2000 in Wilmington, North Carolina. The prestigious award, which has only been given on one other occasion by the Wilmington District, was presented to Bill with managers from both the U.S. Army Corps of Engineers and NCDOT in attendance.

In presenting the Public Service award to Bill, Colonel Delony recognized his outstanding leadership representing NCDOT with exceptional service to the U.S. Army Corps of Engineers, Wilmington District. The award further stated "Mr. Gilmore has demonstrated through this cooperation and coordination with the District's Regulatory Program, his appreciation for and willingness to protect the water resources of the State of North Carolina. He is applauded for championing the "right way" of getting the job done: quality projects that maximize environmental protection. In particular, Mr. Gilmore's efforts to improve NCDOT planning processes as they relate to the Interagency Agreement Integrating Section 404 and NEPA are commended. His efforts reflect great credit upon himself, the NCDOT and the State of North Carolina."

Bill was modest in accepting the award stating "he was accepting on behalf of the Department and he was appreciative for the support from his superiors. He also pointed out PDEA staff members working directly under him should receive much of the credit." Mr. Gilmore, a Professional Engineer with 30 years of experience has spent the past 2-½ years as Manager of the PDEA Branch.

Congratulations Bill for the recognition and for being an outstanding public servant.



William D. Gilmore is presented the
Commander's Award for Public Service

Congratulations Bill for the recognition
and for being an outstanding
Public servant.

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Employee Spotlights & Personnel Update

Phillip Todd



Phillip Todd is a Lead Technical Specialist with the Natural Systems Unit. He received a Bachelors of Science degree in biology from NC State University in May 1993. Phillip accepted a temporary position with the department in September 1993. During The next two and a half years he worked primarily on Natural Resource investigations. After attaining a permanent position in May 1996, Phillip started doing environmental permitting work. Following the Natural Systems Unit's reorganization in October 1998, Phillip continued performing stream and wetland mitigation work, which he began earlier that year, and has helped to train new employees.

Phillip recently enrolled in the North Carolina State University's Masters program in Public Administration with a concentration in Environmental Policy. He hopes to complete this program by May 2003 and continue working with the NCDOT.

Best Wishes to Sue Brady

Sue Brady, an Environmental Specialist with the Natural Systems Unit, will be moving to Washington State at the end of January. Sue's husband, Shawn Cain, is taking a post-doctoral position with the University of Washington's Marine Program.

Sue has worked for the NCDOT since the fall of 1998. She worked on natural resources surveys, permitting, and mitigation sites, and plans to pursue environmental work in Washington. Her expertise and outstanding service will be missed.

Welcome

**Roy
Shelton**



Mr. Roy Shelton has accepted the position of Staff Engineer in the Project Development and Environmental Analysis Branch.

Mr. Shelton received a Bachelors of Science degree in civil engineering from Mississippi State University, and has 34 valuable years of experience working for the FHWA. Roy will be working with the project planning engineers on project issues. Roy, welcome aboard!

Rob Hanson—Promoted

Robert Hanson was recently selected to fill the newly created State Project Planning Engineer position within the Project Development and Environmental Branch (PD&EA). In this role, he will be responsible for project development activities, and planning and environmental documents for all highway projects in the planning phase.

Rob has bachelor and master's degrees in civil engineering from Virginia Tech and N.C. State University, respectively. He began working for the PD&EA Branch in 1987 after participating in the department's cooperative education program. He is a registered professional engineer and a certified public manager.



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Our Mission Statement

Each of the teams in the Natural Systems Unit is responsible for natural resource investigations, obtaining environmental permits, developing wetland and stream mitigation plans, and implementing the construction of mitigation sites.

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